WHAT IS CLAIMED IS:

1. A filter material in which protrusions are formed on the surface of a filter base material by combining said filter base material in which at least a part is covered by a photocatalyst or a material containing a photocatalyst and particles for forming protrusions.

2. The filter material according to claim 1, wherein said filter base material is a glass fiber.

3. The filter material according to claim 1 or 2, wherein said photocatalyst or said material containing photocatalyst is titanium dioxide or a material containing titanium dioxide.

4. A method of manufacturing a filter material, comprising:

a first step of covering a filter base material and particles for forming protrusions with a photocatalyst or a material containing a photocatalyst; and

a second step of forming protrusions on the surface of said filter base material by combining said filter base material and said particles for forming protrusions.

5. The method according to claim 4, wherein said first step and said second step are simultaneously performed.

6. A method of manufacturing a filter material, comprising:

a first step of covering a fiber base material and particles for forming protrusions with a photocatalyst precursor;

a second step of performing an operation for transforming said photocatalyst precursor into a photocatalyst; and

a third step of forming protrusions on the surface of said filter base material by combining said filter base material and said particles for forming protrusions.

7. The method according to claim 6, wherein said first to third steps are simultaneously performed.

8. A gas treatment apparatus comprising:

a gas treatment filter made of a filter material in which a photocatalyst having a refractive index higher than a refractive index of a filter base material is carried on the surface of the filter base material;

means for introducing ultraviolet rays from an end face of said filter into said filter base material; and

means for allowing the ultraviolet rays introduced into said filter base material to leak from said photocatalyst and irradiating the ultraviolet rays to gas in atmosphere to be treated in which said gas treatment filter is installed.

9. A gas treatment apparatus comprising:

a photocatalytic fiber in which a photocatalyst having a refractive index higher than that of a fiber-shaped light guiding member is carried on the surface of the light guiding member having protrusions formed on the surface;

a porous member for properly binding said photocatalytic fibers and constructing a gas treatment unit;

means for introducing ultraviolet rays from an end face of said bundled photocatalytic fibers into said light guiding member; and

means for allowing the ultraviolet rays introduced into said light guiding member to leak from said photocatalyst and irradiating the ultraviolet rays to gas in atmosphere to be treated in which said gas treatment filter is installed.

10. The apparatus according to claim 8, wherein said filter material is glass.

11. The apparatus according to claim 9, wherein said light guiding member is glass.

12. The apparatus according to claim 9 or 11, wherein a spacer is interposed between said porous members.

13. A gas treatment filter having:

a photocatalytic fiber in which a photocatalyst having

a refractive index higher than that of a fiber-shaped light guiding member is carried on the surface of said light guiding member; and

means for arranging the longitudinal direction of a number of said photocatalytic fibers and constructing a gas treatment unit,

wherein at least one end faces of said photocatalytic fibers are fixed by a binder and each of end faces of said light guiding members is polished.

14. A gas treatment apparatus comprising:

photocatalytic fibers in which protrusions are formed on the surface of a filter base material by combining said filter base material and particles for forming protrusion having at least a part covered by a photocatalyst or a material containing the photocatalyst;

means for arranging the longitudinal direction of a number of said photocatalytic fibers and constructing a gas treatment unit;

means for introducing ultraviolet rays from end faces of said bundled photocatalytic fibers into said filter base material; and

means for allowing the ultraviolet rays introduced into said filter base material to be leaked from said photocatalyst and irradiating the ultraviolet rays to gas in atmosphere to be treated in which said gas treatment unit is installed.